

Amendments To The Claims:

This listing of claims will replace all prior versions and listings of claims in this application:

Listing of Claims:

1. (Currently Amended) A method for providing transactional quality of service within an endpoint data processing system, the method comprising the steps of:

requesting a data transmission transaction by an application of said endpoint data processing system;

providing transaction service level information corresponding to said application for a data transmission transaction to a communication process [[executing on a]] of said endpoint data processing system; from an application executing on the data processing system requesting the data transmission transaction, wherein the transaction service level information is provided separate from content data for the data transmission transaction; and

receiving said transaction service level information by said communication process;
evaluating said transaction service level information at said endpoint data processing system;

determining a quality of service level at said endpoint data processing system, wherein said quality of service level is associated with [[the]] said data transmission transaction and is based on [[the]] said transaction service level information received by [[the]] said communication process from the application; and

performing a data transmission by said communications process corresponding to said data transmission transaction and said quality of service level.

2. (Original) A method according to Claim 1, further comprising incorporating information corresponding to the quality of service level into data transmissions associated with the data transmission transaction, wherein the quality of service level information is incorporated separate from the data for the data transmission transaction.

3. (Original) A method according to Claim 2, wherein the step of incorporating information comprises the step of incorporating into at least one header of at least one of the data transmissions an indicator of quality of service for the at least one of the data transmissions.
4. (Original) A method according to Claim 2, wherein the step of incorporating comprises incorporating quality of service level information into an Internet protocol (IP) header field of data transmissions associated with the data transmission transaction.
5. (Original) A method according to Claim 4, wherein the quality of service level information comprises at least one of a type of service value and a differentiated services code point value.
6. (Original) A method according to Claim 2, wherein the data transmissions associated with the data transmission transaction are data transmissions transmitting data provided with a request from the application for the data transmission transaction.
7. (Original) A method according to Claim 2, wherein the data transmissions are data transmissions for a connection associated with a request from the application for the data transmission transaction.
8. (Original) A method according to Claim 2, wherein the data for the data transmission transaction is encrypted.
9. (Original) A method according to Claim 1, further comprising the steps of:
 - determining if the provided transaction service level information is provided for transactions associated with a connection of the communication process; and
 - establishing the determined quality of service level as the quality of service level for subsequent data transmissions associated with the connection if the transaction service level information is provided for transactions associated with a connection of the communication process.

10. (Original) A method according to Claim 9, wherein the step of establishing the determined quality of service level as the quality of service level for subsequent data transmissions associated with the connection comprises allocating system resources for a data processing system associated with the communication process which are based on the determined quality of service for the data transmission.

11. (Original) A method according to Claim 1, further comprising establishing the determined quality of service level as the quality of service level for data associated with a request for a data transmission transaction from the application.

12. (Original) A method according to Claim 11, wherein the step of establishing the determined quality of service level as the quality of service level for data associated with a request for a data transmission transaction from the application comprises allocating system resources for a data processing system associated with the communication process which are based on the determined quality of service for the data transmission transaction.

13. (Original) A method according to Claim 10, wherein the step of establishing the quality of service level comprises the step of establishing transmission parameters associated with the communication process which are based on the determined quality of service for the data transmission transaction.

14. (Original) A method according to Claim 1, further comprising the steps of:
determining if a response associated with the data transmission transaction is received by the communication process; and
allocating resources of a data processing system associated with the communication process to process the received response utilizing a quality of service level based on the determined quality of service of the data transmission transaction established for the data transmissions associated with the received response.

15. (Original) A method according to Claim 14, wherein the response comprises an acknowledgment of a data transmission associated with the data transmission transaction.
16. (Original) A method according to Claim 14, wherein the step of determining if a response associated with the data transmission transaction is received by the communication process comprises determining if a response received by the communication process is associated with a connection associated with the data transmission transaction.
17. (Original) A method according to Claim 14, wherein the quality of service level utilized to allocate resources of the data processing system is different from the determined quality of service.
18. (Original) A method according to Claim 1, wherein the step of determining a quality of service level comprises the steps of:
- determining if the transaction service level includes an identification of a predefined quality of service level; and
 - utilizing the predefined quality of service level as the determined quality of service level if the transaction service level includes an identification of the predefined quality of service level.
19. (Original) A method according to Claim 1, wherein the step of determining a quality of service level comprises utilizing a policy/rule database to determine the quality of service level by providing at least a portion of the transaction service level information to the policy/rule database.
20. (Original) A method according to Claim 1, wherein the step of determining a quality of service level comprises utilizing a predefined quality of service level as the determined quality of service level if the transaction service level includes identification of the predefined quality of service level.
21. (Original) A method according to Claim 1, wherein the communication process comprises a TCP/IP kernel.

22. (Original) A method according to Claim 1, wherein the communication process comprises a communication protocol stack.

23. (Currently Amended) A method for establishing a transactional quality of service level within an endpoint data processing system for the transmission of data, comprising:

providing an application program interface to a communications process of an endpoint node, which both receives content data to be transmitted by the communication process and receives quality of service information associated with the data to be transmitted so as to establish the quality of service level for the transmission of the received content data without reference to the contents of the received content data to be ~~[[transmitted.]]~~ transmitted, wherein:

said application program interface provides said quality of service level to said communication process based upon receiving at least one of a specific quality of service specification from a corresponding application associated with said endpoint data processing system or from application level information which is evaluated to determine said quality of service level at said endpoint data processing system.

24. (Original) A method according to Claim 23, further comprising the step of incorporating quality of service level information into data transmissions separate from the received data so as to allow network devices to establish the quality of service level for the received data without evaluating the contents of the received data.

25. (Original) A method according to Claim 23, further comprising the step of associating the quality of service level for the transmission of the received data with responses received as a result of transmitting the received data so as to establish a quality of service level for processing responses to transmission of the received data.

26. (Original) A method according to Claim 23, wherein the quality of service level is established for all data transmitted for a connection associated with the communication process.

27. (Currently Amended) A system for establishing a quality of service level within an endpoint data processing system for transmitted data, comprising:

a communications process circuit comprising:

a send message application program interface configured to receive content data from at least one application associated with said endpoint data processing system to be transmitted and quality of service information separate from the content data to be transmitted;

a policy service module associated with said endpoint data processing system configured to determine a quality of service level based on the quality of service information; and

a transmit/receive process configured to transmit the received data utilizing the determined quality of service level.

28. (Original) A system according to Claim 27, wherein the communications process comprises a TCP/IP kernel.

29. (Original) A system according to Claim 27, further comprising a quality of service policy database and wherein the policy service module is further configured to determine the quality of service level by referencing the quality of service policy database.

30. (Original) A system according to Claim 27, wherein the transmit/receive process is further configured to receive responses to the transmitted received data and associate the quality of service level of the transmitted received data with the received response.

31. (Original) A system according to Claim 27, further comprising:

a user connection control block which contains a handle to a quality of service policy associated with the transmitted received data; and

a transmission control block which contains a quality of service policy field which is set based on the quality of service policy of the user connection control block; and

wherein the transmit/receive process is further configured to prepare the data for transmission based on the quality of service policy field of the transmission control block.

32. (Currently Amended) A system for providing transactional quality of service within an endpoint data processing system, comprising:

means for requesting a data transmission transaction by an application of said endpoint data processing system;

means for providing transaction service level information corresponding to said application for a data transmission transaction to a communication process [[executing on a]] of said endpoint data processing system; ~~from an application executing on the data processing system requesting the data transmission transaction, wherein the transaction service level information is provided separate from content data for the data transmission transaction; and~~

means for receiving said transaction service level information by said communication process;

means for evaluating said transaction service level information at said endpoint data processing system;

means for determining a quality of service level at said endpoint data processing system, wherein said quality of service level is associated with [[the]] said data transmission transaction and is based on[[the]] said transaction service level information received by [[the]] said communication process ~~from the application; and~~

performing a data transmission by said communications process corresponding to said data transmission transaction and said quality of service level.

33. (Currently Amended) A system for establishing a quality of service level within an endpoint data processing system for the transmission of data, comprising:

an application program interface to a communication process of an endpoint node, which both receives content data to be transmitted by the communications process of the endpoint node and receives quality of service information associated with the data to be transmitted so as to establish the quality of service level for the transmission of the received content data without reference to the contents of the received content [[data.]] data, wherein:

said application program interface provides said quality of service level to said communication process based upon receiving at least one of a specific quality of service specification from a corresponding application associated with said endpoint data processing system or from application level information which is evaluated to determine said quality of service level at said endpoint data processing system.

34. (Currently Amended) A computer program product for providing transactional network quality of service within an endpoint data processing system, comprising:

a computer readable medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code which requests a data transmission transaction by an application of said endpoint data processing system;

computer readable program code which provides transaction service level information corresponding to said application for a data transmission transaction to a communication process [[executing on a]] of said endpoint data processing system; ~~from an application executing on the data processing system requesting the data transmission transaction, wherein the transaction service level information is provided separate from content data for the data transmission transaction; and~~

computer readable program code which receives said transaction service level information by said communication process;

computer readable program code which evaluates said transaction service level information at said endpoint data processing system;

computer readable program code which determines a quality of service level at said endpoint data processing system, wherein said quality of service level is associated with [[the]] said data transmission transaction and is based on [[the]] said transaction service level information received by [[the]] said communication process ~~from the application; and~~

computer readable program code which performs a data transmission by said communications process corresponding to said data transmission transaction and said quality of service level.

35. (Currently Amended) A computer program product for establishing a quality of service level within an endpoint data processing system for the transmission of data, comprising:

a computer readable medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code which provides an application program interface to a communications process of an endpoint node, which both receives content data to be transmitted by the communications process and receives quality of service information associated with the data to be transmitted so as to establish the quality of service level for the transmission of the received content data without reference to the contents of the received content [[data.]] data, wherein:

said application program interface provides said quality of service level to said communication process based upon receiving at least one of a specific quality of service specification from a corresponding application associated with said endpoint data processing system or from application level information which is evaluated to determine said quality of service level at said endpoint data processing system.